



# **STIC Search Report**

## **Biotech-Chem Library**

**STIC Database Tracking Number: 172743**

**TO: Ralph J Gitomer**  
**Location: 3d65 / 3c18**  
**Tuesday, December 13, 2005**  
**Art Unit: 1655**  
**Phone: 571-272-0916**  
**Serial Number: 10 / 814223**

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SEARCH REQUEST FORM

Requester's Full Name: R. G. L. D. M. E. R. Examiner #: 69630 Date: 11/22/05  
Art Unit: 1655 Phone Number: 2- \_\_\_\_\_ Serial Number: 10/214,233  
Location (Bldg/Room#): \_\_\_\_\_ (Mailbox #): \_\_\_\_\_ Results Format Preferred (circle): PAPER DISK  
\*\*\*\*\*  
3C18

To ensure an efficient and quality search, please attach a copy of the cover sheet, claims, and abstract or fill out the following:

Title of Invention: \_\_\_\_\_

Inventors (please provide full names): \_\_\_\_\_

Earliest Priority Date: \_\_\_\_\_

Search Topic:

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known.

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Searcher Phone #: 22504

Searcher Location: \_\_\_\_\_

Date Searcher Picked Up: 12/13/05

Date Completed: 12/13/05

Searcher Prep & Review Time: 20

Online Time: +40

Type of Search

\_\_\_\_ NA Sequence (#)

\_\_\_\_ AA Sequence (#)

\_\_\_\_ Structure (#)

☒ Bibliographic

\_\_\_\_ Litigation

\_\_\_\_ Fulltext

\_\_\_\_ Other

Vendors and cost where applicable

☒ STN \_\_\_\_\_ Dialog

\_\_\_\_ Questel/Orbit \_\_\_\_\_ Lexis/Nexis

\_\_\_\_ Westlaw \_\_\_\_\_ WWW/Internet

\_\_\_\_ In-house sequence systems

\_\_\_\_ Commercial \_\_\_\_\_ Oligomer \_\_\_\_\_ Score/Length

\_\_\_\_ Interference \_\_\_\_\_ SPDI \_\_\_\_\_ Encode/Transl

\_\_\_\_ Other (specify)

=> fil wpix

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FILE LAST UPDATED: 8 DEC 2005 <20051208/UP>  
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'BI ABEX' IS DEFAULT SEARCH FIELD FOR 'WPIX' FILE

=> d all abeq tech abex tot

L44 ANSWER 1 OF 3 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2005-534434 [55] WPIX

DNN N2005-437533 DNC C2005-162130

TI Water quality analysis method using **potassium permanganate**.

DC D14 S03

IN CHEN, B; HUANG, J; LIAO, J

PA (YOUD-N) YOUDA PHOTOELECTRIC CO LTD

CYC 1

PI CN 1591009 A 20050309 (200555)\* G01N033-18 <--

ADT CN 1591009 A CN 2003-155398 20030826

PRAI CN 2003-155398 20030826

IC ICM G01N033-18

ICS C12Q001-04; G01N001-30; G01N033-48

AB CN 1591009 A UPAB: 20050826

NOVELTY - A water quality analysis method using **potassium permanganate**, is new.

DETAILED DESCRIPTION - A method for making water quality analysis by using **potassium permanganate (KMnO4)** whose mole concentration is about 0.02M (mole/l) as staining agent of biological colony in water solution so as to be favorable for purification of water solution and judgement of its purity. Its water quality analysis includes the following steps: firstly, providing a biological filtration membrane, making sample be passed through said biological filtration membrane, culturing said biological filtration membrane, respectively using

**potassium permanganate** to stain the biological filtration membrane according to different culture time durations for about 10-30 sec., then using deionized water to wash the biological filtration membrane, finally counting the colonial number contained on the biological filtration membrane.

Dwg.1/1

FS CPI EPI

FA AB; GI

MC CPI: D04-A01F; D04-A01H; D04-A01J;

D04-B

EPI: S03-E04E; S03-E14B

L44 ANSWER 2 OF 3 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2005-172264 [18] WPIX

DNC C2005-055264

TI Water analysis for detecting the presence of microorganisms in water sample involves staining the microorganisms with **potassium permanganate**.

DC D15 D16 E31 J01 J04

IN CHEN, B; HUANG, C; HUANG, G; LIAO, C

PA (CHEN-I) CHEN B; (HUAN-I) HUANG C; (HUAN-I) HUANG G; (LIAO-I) LIAO C

CYC 1

PI US 2005037451 A1 20050217 (200518)\* 10 C12Q001-04 <--

ADT US 2005037451 A1 US 2004-814233 20040401

PRAI TW 2003-122431 20030814

IC ICM C12Q001-04

AB US2005037451 A UPAB: 20050316

NOVELTY - Water analysis involves providing a bio-membrane as a filter; filtering out the microorganisms in the water sample, using the bio-membrane; cultivating the microorganisms on the bio-membrane; staining the microorganisms on the bio-membrane with **potassium permanganate (KMnO4)**; rinsing the bio-membrane with purified de-ionized water; and performing a colony count for readable microorganisms on the bio-membrane.

USE - For water analysis in detecting the presence of microorganisms in a water sample (claimed).

ADVANTAGE - The method of using **potassium permanganate** in water analysis can efficiently reduce the time that allows about 90% identify rate to be obtained. The method can easily detect the presence of microorganisms in a water sample during the semiconductor manufacturing processes, using **potassium permanganate** as dyes. The method is timesaving and allows ease for detecting the presence of microorganisms in a water sample during the semiconductor manufacturing processes compared with the conventional method. Also, the method is an economic method for identifying the microorganism colonies because of the low prices of **potassium permanganate**.

Dwg.0/7

FS CPI

FA AB; DCN

MC CPI: D04-A01E; D04-A01H; D04-A01J; D05-H09;  
D05-H13; E35-S; J01-H03; J01-X01C; J04-B01;  
J04-C01

L44 ANSWER 3 OF 3 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 1983-763976 [37] WPIX

DNN N1983-163423 DNC C1983-089040

TI Measuring **microorganism** e.g. Candida concentrate - by treating cell suspension with mono potassium phosphate, oxidising with **potassium permanganate** and measuring kinetic chemiluminescence.

DC B04 D16  
 IN LYSOV, V D; MEXENTSEV, A N; TSIBANOVA, I V  
 PA (BIOL-R) BIOL INSTR RES INST  
 CYC 1  
 PI SU 973610 A 19821115 (198337)\* 6  
 PRAI SU 1981-3294236 19810528  
 IC C12N001-00; C12Q001-06  
 AB SU 973610 A UPAB: 19930925

**Microorganism** cell concentration in aqueous cell suspension is determined by: forming a cell suspn. in water; adding KH<sub>2</sub>PO<sub>4</sub> to pH 4.0-4.7; holding 2-10 mins.; oxidising with **KMnO<sub>4</sub>**; and measuring kinetic chemiluminescence. The method has good accuracy for measurement of live cell concentration

In a typical operation 0.5mls. of 0.1M KH<sub>2</sub>PO<sub>4</sub> are added to 0.5 mls. of a *Candida guilliermondii* suspn. and held 2 mins. at room temperature 0.2mls. are then sampled and treated with 0.2mls. of oxidiser solution (0.1% **KMnO<sub>4</sub>** + 1.8M BaCl<sub>2</sub>). The kinetic chemiluminescence is then monitored to obtain a measure of live cell concentration Bul. 42/15.11.82.  
 0/0

FS CPI  
 FA AB  
 MC CPI: B04-B02B; B11-C07B; B12-K04; D05-H

=> => fil hcaplus

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L64 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2005:140691 HCAPLUS  
 DN 142:182650  
 ED Entered STN: 18 Feb 2005  
 TI Method of using **potassium permanganate** in water analysis  
 IN **Chen, Bo-Cun; Huang, Chiao-Chung; Liao, Ching-Wei; Huang, Guo-Ming**  
 PA Taiwan

SO U.S. Pat. Appl. Publ., 10 pp.

CODEN: USXXCO

DT Patent

LA English

IC ICM C12Q001-04

INCL 435034000

CC 61-3 (Water)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005037451	A1	20050217	US 2004-814233	20040401
	CN 1591009	A	20050309	CN 2003-155398	20030826
PRAI	TW 2003-92122431	A	20030814		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2005037451	ICM	C12Q001-04
	INCL	435034000
US 2005037451	NCL	435/034.000
	ECLA	C12Q001/04

AB A method of water anal. for detecting the presence of **microorganisms** in a H2O sample, comprises the steps of: 1st, providing a bio-membrane as a filter; filtering out the **microorganisms** in the H2O sample, using the bio-membrane; cultivating the **microorganisms** on the bio-membrane; staining the **microorganisms** on the bio-membrane with **K permanganate (KMnO4)**; rinsing the bio-membrane with purified deionized H2O; and finally, and counting **microorganisms**.

ST **potassium permanganate** water analysis

**microorganism** filter staining

IT Filters

(biofilters; method of using **potassium permanganate** in water anal.)

IT Analysis

Membrane, biological

Membrane filters

**Microorganism**

Staining, biological

(method of using **potassium permanganate** in water anal.)

IT 7732-18-5, Water, analysis

RL: ARU (Analytical role, unclassified); **ANST (Analytical study)**

(anal.; method of using **potassium permanganate** in water anal.)

IT 7722-64-7, **Potassium permanganate**

RL: ARU (Analytical role, unclassified); TEM (Technical or engineered material use); **ANST (Analytical study)**; **USES (Uses)**

(method of using **potassium permanganate** in water anal.)

IT 7732-18-5, Water, analysis

RL: ARU (Analytical role, unclassified); **ANST (Analytical study)**

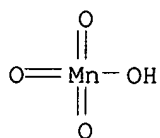
(anal.; method of using **potassium permanganate** in water anal.)

RN 7732-18-5 HCAPLUS

CN Water (8CI, 9CI) (CA INDEX NAME)

H2O

IT 7722-64-7, Potassium permanganate  
 RL: ARU (Analytical role, unclassified); TEM (Technical or engineered material use); ANST (Analytical study); USES (Uses)  
 (method of using potassium permanganate in water anal.)  
 RN 7722-64-7 HCAPLUS  
 CN Permanganic acid (HMnO4), potassium salt (8CI, 9CI) (CA INDEX NAME)



● K

L64 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 1979:156884 HCAPLUS  
 DN 90:156884  
 ED Entered STN: 12 May 1984  
 TI Characterizing the dissolved and colloidal suspended organic substances in water  
 AU El-Bassam, Nasir; Mueller, Hans Emil; Tietjen, Cord  
 CS Inst. Pflanzenbau Saatgutforsch., Bundesforschungsanst. Landwirtsch., Braunschweig, Fed. Rep. Ger.  
 SO Landbauforschung Voelkenrode (1978), 28(2), 70-4  
 CODEN: LVOEAC; ISSN: 0458-6859  
 DT Journal  
 LA German  
 CC 61-2 (Water)  
 Section cross-reference(s): 60  
 AB Tests on river water, effluent from sewage treatment plants, and soil water indicated that the dissolved organic C (DOC) method (photochem. oxidation)  
 is more reproducible than the COD method (KMnO4), although a high Cl- content interferes. The KMnO4 method determined, on the average, only 51.2% of organic C, regardless of sample origin. The BOD method also determined part of the N, giving 157.6% of the values obtained by the DOC method for sewage effluent. The BOD increased significantly with increasing NH4 content. The C determined in soil water by BOD was 24.6% of that determined by DOC, possibly due to loss of microorganisms by filtration.  
 ST org matter detn water; BOD water carbon detn; carbon org detn water; wastewater treatment carbon detn  
 IT Biochemical oxygen demand  
 (carbon determination by, in water, evaluation of)  
 IT Organic matter  
 (determination of, in water, evaluation of methods for)  
 IT 7440-44-0, analysis  
 RL: ANT (Analyte); ANST (Analytical study)  
 (determination of, in water, evaluation of methods for)  
 IT 14798-03-9, occurrence  
 RL: OCCU (Occurrence)  
 (in water, errors in carbon determination by BOD method in presence

of)  
 IT 7732-18-5, analysis  
 RL: ANST (Analytical study)  
 (organic matter determination in, evaluation of methods for)  
 IT 7732-18-5, analysis  
 RL: ANST (Analytical study)  
 (organic matter determination in, evaluation of methods for)  
 RN 7732-18-5 HCAPLUS  
 CN Water (8CI, 9CI) (CA INDEX NAME)

H<sub>2</sub>O

L64 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 1975:76838 HCAPLUS  
 DN 82:76838  
 ED Entered STN: 12 May 1984  
 TI Improvement of the method for the determination of **BOD** in highly  
 polluted waters  
 AU Sostaric, N.  
 CS Inst. Hydrometerol. Croatia, Zagreb, Yugoslavia  
 SO Arhiv za Higijenu Rada i Toksikologiju (1974), 25(2), 177-83  
 CODEN: AHRTAN; ISSN: 0004-1254  
 DT Journal  
 LA Croatian  
 CC 60-3 (Sewage and Wastes)  
 AB The **BOD** values of a prepared sample of water put in various flasks  
 varied with the dilution and the ratio of dissolved O to **BOD** in the  
 flasks. **BOD** of the dilution water alters the **BOD** value  
 of the sample, partly because of the roughness of the internal flask  
 surface and the presence of microelements which affect the microbiol.  
 processes. The same O-**BOD** ratio must be maintained. The amount  
 of **KMnO<sub>4</sub>** used and its ratio to **BOD** are good indicators  
 of relatively exact dilution This ratio should vary within  $1.5 \pm 12\%$ ,  
 i.e. from 1.34 to 1.68. The greater the dilution of the original sample, the  
 stronger is the effect of **BOD** of the dilution water.  
 ST **BOD** detn polluted water  
 IT **Biochemical oxygen demand**  
 (determination of, in waste water, dilution in relation to)  
 IT 7732-18-5, analysis  
 RL: ANST (Analytical study)  
 (BOD determination in waste, dilution in relation to)  
 IT 7732-18-5, analysis  
 RL: ANST (Analytical study)  
 (BOD determination in waste, dilution in relation to)  
 RN 7732-18-5 HCAPLUS  
 CN Water (8CI, 9CI) (CA INDEX NAME)

H<sub>2</sub>O

=> => d his

(FILE 'WPIX' ENTERED AT 12:30:33 ON 13 DEC 2005)  
 DEL HIS

, jan delaval - 13 december 2005



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          E POTASSIUM PERMANGANATE/CN
L1          1 S E3
L2        4006 S (K OR POTASSIUM) (A) PERMANGANATE OR PERMITAB OR KMNO4
L3        1673 S R01730/DCN OR 1730/DRN
L4        4521 S L2,L3
L5          13 S L4 AND D04-A01/MC
L6          11 S L4 AND D04-A/MC
L7          15 S L4 AND D04-A01E/MC
L8          10 S L4 AND D04-A01J/MC
L9        284 S L4 AND D04-A?/MC
L10       284 S L5-L9
L11         2 S L10 AND C12Q/IPC
L12        34 S L4 AND C12Q/IPC
L13        34 S L11,L12
L14         1 S L13 AND J04-C01/MC
L15         3 S L13 AND J04-B01/MC
L16         5 S L13 AND D05-H13/MC
L17         7 S L14-L16
L18         8 S L11,L17
          SEL DN AN 1 2
L19         2 S L18 AND E1-E5
L20        26 S L13 NOT L18
L21         3 S L20 AND MICROORGANISM
          SEL DN AN 3
L22         1 S E6-E8 AND L21
L23         3 S L19,L22 AND L2-L22
L24         1 S US20050037451/PN OR (US2004-814233# OR TW2003-122431)/AP, PRN
          E CHEN B/AU
L25        1299 S E3,E6,E7
          E HUANG C/AU
L26        2981 S E3,E6-E8
          E LIAO C/AU
L27         441 S E3,E19
          E HUANG G/AU
L28        736 S E3,E14
          E AU OPTRONIC/PA
L29        976 S E4-E7
          E AUOPTRONIC/PA
          E OPTRONIC/PA
L30       1365 S E3-E32
L31         9 S L4 AND L25-L30
          SEL DN AN 1 2
L32         2 S L31 AND E1-E5
L33         3 S L23,L24,L32 AND L1-L32
L34        45 S L4 AND V5?/M0,M1,M2,M3,M4,M5,M6
L35       124 S L4 AND C12R/IPC
L36         0 S L34,L35 AND L10
L37        29 S G01N033-18/IPC AND L4
L38         0 S L34,L35 AND L37
L39       260 S D04-B?/MC AND L4
L40         0 S L39 AND L34,L35
L41        10 S L37 AND L39
          SEL DN AN 1
L42         1 S L41 AND E6-E8
L43        19 S L37 NOT L41
L44         3 S L33,L42 AND L1-L43

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FILE 'WPIX' ENTERED AT 12:53:05 ON 13 DEC 2005

FILE 'REGISTRY' ENTERED AT 12:53:29 ON 13 DEC 2005

E POTASSIUM PERMANGANATE/CN  
L45 1 S E3  
L46 18 S 13465-41-3/CRN AND K/ELS

FILE 'HCAPLUS' ENTERED AT 12:54:28 ON 13 DEC 2005  
L47 10682 S L45  
L48 47095 S (K OR POTASSIUM) (A) PERMANGANATE OR PERMITAB OR KMNO4  
L49 47827 S L47,L48

FILE 'REGISTRY' ENTERED AT 12:54:58 ON 13 DEC 2005  
L50 1 S WATER/CN

FILE 'HCAPLUS' ENTERED AT 12:55:00 ON 13 DEC 2005  
L51 80374 S L50(L) (ANT OR ANST)/RL  
L52 548 S L49 AND L51  
L53 597 S L51 AND MICROORG?  
L54 2 S L52 AND L53  
E BIOCHEMICAL OXYGEN DEMAND/CT  
E E3+ALL  
L55 4273 S E2  
L56 18609 S E2/BI OR E3/BI  
L57 27 S L52 AND L55,L56  
SEL DN AN 19  
L58 1 S E1-E3 AND L57  
L59 25 S L49 AND (CHEN B? OR HUANG C? OR LIAO C? OR HUANG G?)/AU  
L60 1 S L59 AND L51  
L61 1 S L59 AND WATER?/SC,SX  
L62 1 S L60,L61  
L63 3 S L54,L58,L62  
L64 3 S L63 AND L49,L51-L63

FILE 'HCAPLUS' ENTERED AT 13:00:43 ON 13 DEC 2005

FILE 'AQUALINE' ENTERED AT 13:01:39 ON 13 DEC 2005  
L65 380 S L48  
L66 0 S L65 AND MICROORG?  
L67 3 S L65 AND MICRO ORG?  
E MICROORGANISM/CT  
L68 0 S E4,E5 AND L65 NOT L67  
L69 15 S BACTERIA/CT AND L65 NOT L67  
E MONITOR/CT  
L70 10 S E4-E8 AND L65  
L71 9 S L70 NOT L67,L69

FILE 'AQUASCI' ENTERED AT 13:04:57 ON 13 DEC 2005  
L72 215 S L48  
E MICROORGANISM/CT  
L73 3 S E3-E6 AND L72  
E MONITOR/CT  
L74 1 S E5-E11 AND L72  
E BACTERIA/CT  
L75 27 S BACTER? AND L72  
L76 17 S BACTER?/CT AND L72  
L77 24 S L75,L76 NOT L73-L74

FILE 'AQUIRE' ENTERED AT 13:07:35 ON 13 DEC 2005  
L78 549 S L48  
L79 326 S L45  
L80 549 S L78,L79  
L81 0 S L80 AND MICROORG?

L82 0 S L80 AND MICRO ORG?  
L83 8 S L80 AND BACTER?

FILE 'OCEAN' ENTERED AT 13:08:18 ON 13 DEC 2005

L84 27 S L48  
L85 4 S L84 AND (MICROORG? OR MICRO ORG? OR BACTER?)

=>